

Associated Gateway Exchange in Multi-segment SD-WAN

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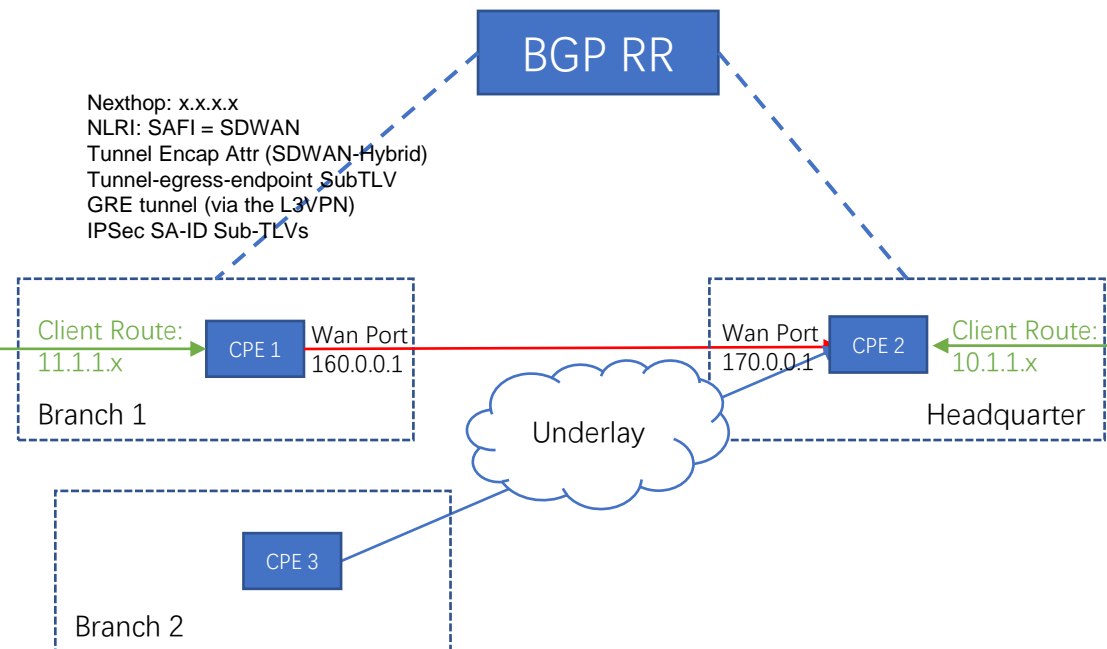
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Multi-segment SD-WAN

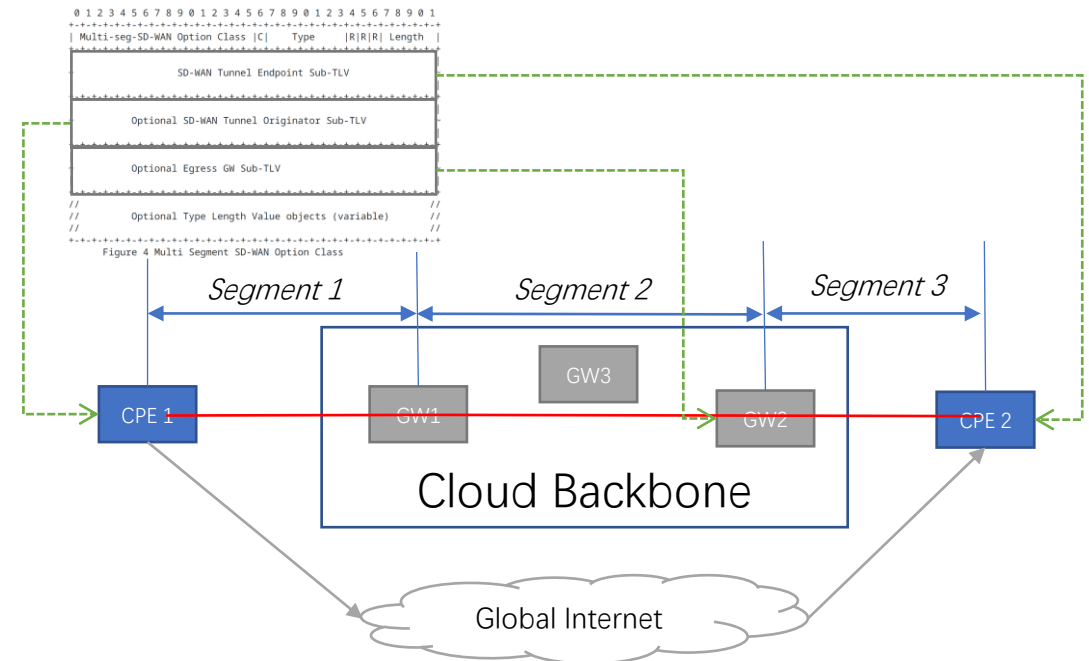
Draft-ietf-idr-sdwan-edge-discovery

- IPsec tunnels to existing VPN Path
- BGP as the control plane to distribute Port attribute, IPsec SA
- New SDWAN-Hybrid Tunnel Type and SDWAN SAFI



Draft-ietf-rtgwg-multisegment-sdwan

- When global internet quality is bad, Cloud backbone can be leveraged to improve the SDWAN connection quality. Cloud backbone act as one **segment** of SDWAN tunnel
- Geneve header is extended to carry the destination/source CPE and Egress GW



BGP extension to advertise associated GW

- CPE learns its associated GW through config/protocol
- Destination CPE(CPE2) need to tell the source CPE(CPE 1) its associated GW(GW2) information through BGP SDWAN-Underlay Update

1. New SDWAN NLRI to identify CPE

```

+-----+
| Route Type = 2 | 2 octet
+-----+
| Length         | 2 Octet
+-----+
| SD-WAN Color  | 4 octets
+-----+
| SD-WAN-Node-ID | 4 or 16 octets
+-----+

```

SD-WAN Color = Site ID

2. New SD-WAN-Hybrid Tunnel sub TLV to carry its GW address

```

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-----+-----+-----+-----+
| Type=TBD | length | Priority |
+-----+-----+-----+-----+
| Associated GW Addr Family | Address |
+-----+-----+-----+-----+
| ~ | ~ |
+-----+-----+-----+-----+
| Associated GW Address |
+-----+-----+-----+-----+

```

Associated GW Address = IPv4/IPv6 address

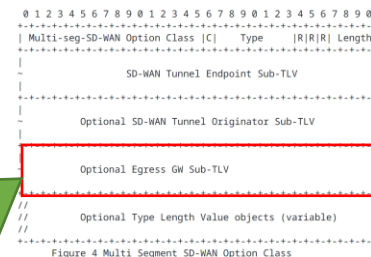


Figure 4 Multi Segment SD-WAN Option Class

